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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,117	10/21/2003	Miinoru Yoshida	NSG-209US2	5361

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EXAMINER

LEE, CHEUKFAN

ART UNIT PAPER NUMBER

2627

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/690,117	Applicant(s) YOSHIDA, MIINORU	
	Examiner Cheukfan Lee	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/087,410.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/21/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

1. Claims 1-6 are pending. Claims 1 and 2 are independent.
2. The drawings are objected to because of the following:

Figs. 1 and 12 should be labeled with – PRIOR ART --. Please see page 3, line 6 and page 11, line 20 of the specification.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “uneven portion on a front surface on the side on which the light transmitting original is placed” of claim 1 and the “projection having a periodic array on a front surface on which the light transmitting original is placed” of claim 2 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

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of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The abstract is objected to as being non-descriptive of the claimed invention.

5. The disclosure is objected to because of the following informalities:

Page 3, line 15 of the disclosure, "A area light source" should read – An area light source --.

Appropriate correction is required. Please check for minor errors throughout the specification.

6. Claims 2-6 are objected to for the following reasons:

In claim 2, line 2 of the claim, "a area light source" should be – an area light source --.

Claims 3-6 are objected to as being dependent upon the objected claim 2.

7. The following quotations of 37 CFR § 1.75(d)(1) is the basis of objection:

(d)(1) The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description. (See § 1.58(a)).

8. Claim 4 is objected to under 37 CFR § 1.75 as failing to conform to the invention as set forth in the remainder of the specification.

Claim 4 is written in languages in alternative form. The claim includes limitations of the two exclusive embodiments described in the specification, the third embodiment described on page 38+ and the modified third embodiment described on page 44+. The claim languages include "apparatus according to claims 1 or 2" and "the original base having said the uneven portion or said projection having the periodic array". The phrases themselves are not improper. However, when interpreted as a whole, the claim does not conform to the invention described in the specification. Because of the use of these limitations in alternative form, the claim is interpreted in the following four different ways, which are four of several ways of interpretation:

A) An image reading apparatus according claim 1, wherein an average coarseness of a center line Ra of the original base having said projection having the periodic array formed on the surface thereof ranges ...

B) An image reading apparatus according claim 2, wherein an average coarseness of a center line Ra of the original base having said uneven portion formed on the surface thereof ranges ...

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C) An image reading apparatus according claim 1, wherein an average coarseness of a center line Ra of the original base having said uneven portion or said projection having the periodic array formed on the surface thereof ranges ...

D) An image reading apparatus according claim 2, wherein an average coarseness of a center line Ra of the original base having said uneven portion or said projection having the periodic array formed on the surface thereof ranges ...

Note that interpretation A) requires that the original base has "said projection having periodic array". The original base in claim 1 has an uneven portion, not the projection having periodic array. An embodiment wherein the original base having the uneven portion and "said projection having the period array" is not described in the specification. Besides, the term "said projection having the period array" lacks antecedent basis since the basis has not been set forth in claim 1.

Interpretation B) requires that the original base has "said uneven portion". The original base in claim 2 has a projection having a periodic array, not the uneven portion. An embodiment wherein the original base having a projection having the period array and "said uneven portion" is not described in the specification. Besides, the term "said projection having the period array" lacks antecedent basis since the basis for the term has not been set forth in claim 2.

Note that interpretations C) and D) each require an embodiment that provides the option that the original base has the uneven portion or the projection having the

period array. Such embodiment is not described in the specification. The specification describes an embodiment (the third embodiment, page 38+) that has an original base having an uneven portion and an embodiment (the modified third embodiment, page 44+) that has an original having a projection having a periodic array, but not the embodiment of claim C) or D).

Claim 4 should be rewritten to claim one embodiment and not a combination of two or more exclusive embodiments.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-6, insofar as claim 4 is understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art and Ishikawa et al. (U.S. Patent No. 6,128,105).

Regarding claim 1, Applicant's admitted prior art image reading apparatus, discussed on page 3, lines 6-26 of the specification with reference to prior art Fig. 1, is of a contact image sensor type having an area light source (65), for reading a light transmitting original placed on an original base (63) by irradiating light thereto from the area light source (65) and receiving transmission light.

Applicant's admitted prior art differs from the claimed invention in that the prior art original base does not include an uneven portion, which prevents adhesion of the original to the original base.

Ishikawa et al. discloses a contact type image sensor for reducing friction or adhesion between the original glass (82) (original base) and the original (or subject-sheet) (Fig. 13, col. 6, lines 22-29). The surface of the original glass (original base) is made uneven. The original is placed in contact with the uneven surface without effect to optical characteristics for reading the original (Fig. 13, col. 6, lines 26-28, col. 5, lines 62-65 and 10-20).

Ishikawa et al. teaches the concept of making an original base uneven, in order to reduce or prevent adhesion of the original to the original base upon placing the original on the base. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ishikawa and Applicant's admitted prior art to provide an image reading apparatus wherein the original base, on which the original is placed during scanning, has an uneven portion on a front surface on the side on which the light transmitting original is placed without effect to optical characteristics for reading the transparent original so that the adhesion of the original to the original base is prevented.

Regarding claim 2, the claim limitations are the same as the limitations of claim 1, except for the limitation of the original base. Specifically, the original base of claim 2 has "a projection having a periodic array", whereas the original base of claim 1 has an

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uneven portion". Ishikawa et al. discloses an embodiment shown in Fig. 10 wherein the original base surface has a sheet (76) having an uneven surface. The sheet is for preventing or reducing adhesion between the original and the original base. The sheet (76) is a projection having a periodic array (Fig. 10). The original is placed in contact with the projection (76) with the uneven surface without effect to optical characteristics for reading the original (Fig. 10, col. 5, lines 62-65 and 10-20).

Regarding claim 3, Applicant's prior art apparatus comprises a line light source (in image sensor unit 61, in Fig. 1, page 3, lines 6-11 of the disclosure).

Regarding claim 4, Ishikawa et al. discloses the depth of unevenness of the surface of the plate glass (82 in Fig. 13) (col. 6, lines 22-28, col. 5, lines 58-65, lines 9-12). Although Ishikawa et al. does not disclose that the average coarseness of a center line Ra of the original base satisfies the inequality

$$0.02 \mu\text{m} \leq \text{Ra} \leq 1.0 \mu\text{m},$$

it would have been an obvious design choice to have the coarseness to be within the defined range from $0.02 \mu\text{m}$ and $1.0 \mu\text{m}$ in order to have the unevenness as unnoticed to human eyes as possible, since Ishikawa et al. teaches the concept of having the surface of the original plate glass made uneven to reduce or prevent adhesion of an original to the original plate glass.

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Regarding claim 5, both the original bases of Applicant's prior art and Ishikawa et al. are in form of a glass plate (glass plate on page 3, line 12 of Applicant's disclosure, and glass plate 82 of Ishikawa et al. at col. 6, lines 22-23).

Regarding claim 6, Applicant's admitted prior art differs from the claimed invention in that the prior art area light source (65) does not have a scattering plate that includes an uneven portion.

As discussed for claim 1 above, the use of the uneven surface of the contact type image sensor of Ishikawa et al. is to reduce or prevent adhesion of the original to the surface (Fig. 13, col. 6, lines 22-29, col. 5, lines 62-65 and 10-20, and Abstract).

Ishikawa et al. teaches the concept of making an original contact surface uneven to reduce or prevent adhesion of the original to the original contact surface. Observing Applicant's prior art image reading apparatus (Fig. 1), one of ordinary skill in the art would have seen that the light transmitting original is in contact with not only the original base (63) but also the lower surface of the area light source (65) as well, which causes the possibility of adhesion of the original to the lower surface of the area light source. Therefore, with the teaching of Ishikawa et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a light scattering plate having an uneven portion as the lower surface of the area light source (65 in Fig. 1) of the apparatus of Applicant's prior art in view of Ishikawa et al. in order to reduce or prevent adhesion of the original to the area light source (65). As discussed for claim 1

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above, the uneven surface does not have effect to optical characteristics for reading the original (Ishikawa et al., Fig. 13, col. 6, lines 22-29, col. 5, lines 62-65 and 10-20).

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Craig et al. (U.S. Patent No. 6,154,294) discloses an apparatus for scanning documents such as photographs using a contact image sensor for reducing the friction (reducing adhesion) between the contact image sensor and the document being scanned, by using a non-stick material or by reducing the static electricity forces or both.

Leonard (U.S. Patent No. 5,486,932) discloses a document scanner and vacuum table thereof.

Koshiyouji et al. (U.S. Patent No. 4,989,099) discloses an image information reading apparatus having a translucent plate (62) provided on the bottom face side of a two-dimensional light transmission unit (44) for illuminating a transparent original (Figs. 5 and 6).

Inoue et al. (U.S. Patent No. 5,781,311) discloses a planar light source for an image reading device.


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheukfan Lee whose telephone number is (571) 272-7407. The examiner can normally be reached on 9:30 a.m. to 6:00 p.m., Mon-Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cheukfan Lee
December 6, 2005



Cheukfan Lee